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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,060	01/30/2004	Yusuke Nakazawa	Q78017	5491

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EXAMINER
TRAN, LY T

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/767,060	NAKAZAWA, YUSUKE	
	Examiner	Art Unit	
	Ly T. TRAN	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 20-22* is/are rejected.

7)☒ Claim(s) *17-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-3, 5, 9-14, 20-22 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezanka (USPN 5,757,407) in view of Brinkly (USPN 6,397,488) and Teraoka et al (USPN 6,652,084)

With respect to claims 1-3, 5,10-14, 21 and 16, Rezanka discloses an recording apparatus comprising:

- Image forming means for forming an image on a recording medium by ejecting ink (Fig.1: element 36)
- Fixing means for fixing the image formed on the recording medium (fig.1: 42).
- Fixing means includes a heating section that heats and fixes the image (fig.1: element 42)

However, Razanka fails to teach the collecting means, removing means and shielding means, ink containing a solvent and color particles dispersed in the solvent.

Brinky teaches:

- Collecting means (element 98) for selectively collecting air containing solvent from an atmosphere in proximity to fixing means
- Removing means for removing the solvent from the solvent containing air collected by the collecting means (element 102)
- Collecting means including shields means for shielding at least a region in proximity to the fixing means (element 80)
- Collecting means includes suction means for sucking (element 88) and collecting the solvent containing air from the region shielded by the shield means (element 98)
- Shield means (element 98) shield at least a region in proximity to the heating section

With the combination of Rezanka and Brinkly, least a portion of fixing means is positioned inside the collecting means, the collecting means includes a hood (fig.2: element 80), the fixing means is positioned between the recording medium and the collecting means (Fig.2)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the teach the collecting means, removing means and shielding means as taught by Brinkly. The motivation of doing is help maximize printing device throughout and minimize excessive heat generation so to avoid the wasted heat energy.

Teraoka teaches the ink containing a solvent and color particles dispersed in the solvent (Column 6: line 40-67)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have ink containing solvent and color particles dispersed as taught by Teraoke. The motivation of doing so is to provide the ink with a fast penetrability even into a sized paper.

With respect to claims 9, 20 and 22, since the combination of Rezanka and Brinkly discloses the claimed invention except for the hood has a curved shape. It would have been an obvious matter of design choice to have a curve shape, since Applicant has not disclosed that the curve shaped of the hood solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any shape.

2. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezanka (USPN 5,757,407) in view of Brinkly (USPN 6,397,488) and Teraoka et al (USPN 6,652,084) as applied to claim 1 above, further in view of Wotton et al (USPN 6,390,618).

The combination of Razanka, Brinkly and Teraoka fails to teach blowing means.

Wotton teaches blowing means (Fig.4: element 301).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a blowing means as taught by Wotton. He motivation of doing so is to improvement in drying time.

3. Claim 6 - 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brinkly (USPN 6,397,488) in view of Teraoka et al (USPN 6,652,084) as applied to claim 1 above, further in view of Lin (USPN 5,764,263).

The combination of Brinkly and Teraoka fails to teach preheating means being provided between the image forming means and the fixing means and the heat of air.

Lin teaches the preheating means can be before or after application of ink (Column 10: line 64-66) and can be at any location in the in jet printing process (Column 11: line 2-4) and Lin also teaches that the heating device and preheating means can use any known heating means including heating belt, a radiant heater or hot air.

It would have been obvious to one having ordinary skill in the art at the time the invention was made as modify to have the preheating means as taught by Lin. The motivation of doing is to obtain print quality in high-resolution printer without causing undesired curl of the printed material.

Allowable Subject Matter

4. Claims 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 17-19 are allowable over prior art of record because at least prior art have not been found to anticipate or teach a preliminary heater which preliminary heats the recording medium on which the image has been formed by the ejection head using air which has been collected by the hood and from which the solvent has been removed by

the solvent removing device, prior to heating and fixing by the heating device, the preliminary heater being provided between the ejection head and the heating device.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LT

June 28, 2006

6/30/06

MANISH S. SHAH
PRIMARY EXAMINER